

AdditionalFile1: Effects of larvicides on mosquito vectors from Mayotte.

Species	Insecticide	Strain	N	LC ₅₀ / EIC ₅₀ (Cl ₉₅)	LC ₉₅ / EIC ₉₅ (Cl ₉₅)	Slope	RR ₅₀ (Cl ₉₅)	RR ₉₅ (Cl ₉₅)
<i>An. gambiae</i>	Temephos	KIS	1164	1.5x10 ⁻³ (1.2x10 ⁻³ – 1.8x10 ⁻³)	5.0x10 ⁻³ (4.1x10 ⁻³ – 6.7x10 ⁻³)	3.17	-	-
		DZOU	1080	7.4x10 ⁻³ (6.1x10 ⁻³ – 9.1x10 ⁻³)	6.4x10 ⁻² (4.1x10 ⁻² – 1.3x10 ⁻¹)	1.75	4.84 (4.16 - 5.64)	12.9 (7.68 - 21.6)
	<i>Bti</i>	KIS	900	1.9x10 ⁻¹ (1.4x10 ⁻¹ – 2.4x10 ⁻¹)	6.1x10 ⁻¹ (4.1x10 ⁻¹ – 1.87)	3.23	-	-
		DZOU	1000	1.9x10 ⁻¹ (1.7x10 ⁻¹ – 2.1x10 ⁻¹)	5.1x10 ⁻¹ (4.3x10 ⁻¹ – 6.7x10 ⁻¹)	3.9	1.02 (0.64 - 1.6)	0.83 (0.05 - 13.7)
	Spinosad	KIS	1289	3.2x10 ⁻³ (2.7x10 ⁻³ – 3.8x10 ⁻³)	1.7x10 ⁻² (1.3x10 ⁻² – 2.5x10 ⁻²)	2.27	-	-
		DZOU	1367	5.0x10 ⁻³ (3.7x10 ⁻³ – 6.5x10 ⁻³)	3.1x10 ⁻² (2.0x10 ⁻² – 6.1x10 ⁻²)	2.07	1.54 (1.37 - 1.73)	1.8 (1.31 - 2.48)
	Diflubenzuron	KIS	496	1.7x10 ⁻³ (1.5x10 ⁻³ – 2.0x10 ⁻³)	3.5x10 ⁻³ (2.9x10 ⁻³ – 4.9x10 ⁻³)	5.34	-	-
		DZOU	416	1.7x10 ⁻³ (6.9x10 ⁻⁴ – 2.7x10 ⁻³)	5.6x10 ⁻³ (3.2x10 ⁻³ – 3.81)	3.19	0.99 (0.84 - 1.16)	1.59 (0.99 - 2.55)
	Pyriproxyfen	KIS	595	5.1x10 ⁻⁵ (3.3x10 ⁻⁵ – 7.3x10 ⁻⁵)	5.5x10 ⁻⁴ (3.4x10 ⁻⁴ – 1.2x10 ⁻³)	1.6	-	-
		DZOU	507	9.9x10 ⁻⁶ (1.7x10 ⁻⁶ – 1.7x10 ⁻⁵)	1.2x10 ⁻⁴ (6.1x10 ⁻⁵ – 1.0x10 ⁻³)	1.54	0.19 (0.17 - 0.22)	0.21 (0.17 - 0.26)
<i>Methopren</i>	KIS	285	1.9x10 ⁻³ (1.2x10 ⁻³ – 3.0x10 ⁻³)	1.5x10 ⁻² (7.5x10 ⁻³ – 5.7x10 ⁻²)	1.84	-	-	
		DZOU	594	7.1x10 ⁻⁴ (3.6x10 ⁻⁴ – 1.2x10 ⁻³)	2.9x10 ⁻² (1.1x10 ⁻² – 1.8x10 ⁻¹)	1.02	0.38 (0.32 - 0.45)	1.95 (1.04 - 3.63)
<i>Cx. p. quinquefasciatus</i>	Temephos	SLAB	994	1.5x10 ⁻³ (1.3x10 ⁻³ – 1.7x10 ⁻³)	3.3x10 ⁻³ (2.7x10 ⁻³ – 4.8x10 ⁻³)	4.59	-	-
		TZI	1174	2.5x10 ⁻² (2.2x10 ⁻² – 2.8x10 ⁻²)	6.3x10 ⁻² (5.2x10 ⁻² – 8.4x10 ⁻²)	4.1	17.2 (14.9 - 19.9)	18.9 (12.8 - 28.1)
	<i>Bti</i>	SLAB	986	1.8x10 ⁻¹ (6.1x10 ⁻² – 2.5x10 ⁻¹)	6.6x10 ⁻¹ (4.7x10 ⁻¹ – 2.28)	2.94	-	-
		TZI	1302	2.7x10 ⁻¹ (2.4x10 ⁻¹ – 3.0x10 ⁻¹)	6.9x10 ⁻¹ (5.9x10 ⁻¹ – 8.7x10 ⁻¹)	3.97	1.46 (0.77 - 2.77)	1.04 (0.04 - 28)
	Spinosad	SLAB	994	6.8x10 ⁻² (5.9x10 ⁻² – 7.9x10 ⁻²)	2.7x10 ⁻¹ (2.1x10 ⁻¹ – 3.6x10 ⁻¹)	2.77	-	-
		TZI	1184	1.0x10 ⁻¹ (8.8x10 ⁻² – 1.2x10 ⁻¹)	4.5x10 ⁻¹ (3.4x10 ⁻¹ – 6.6x10 ⁻¹)	2.57	1.52 (1.11 - 2.09)	1.69 (0.37 - 7.77)
	Diflubenzuron	SLAB	244	2.2x10 ⁻³ (9.9x10 ⁻⁴ – 3.4x10 ⁻³)	6.6x10 ⁻³ (3.9x10 ⁻³ – 4.7x10 ⁻¹)	3.45	-	-
		TZI	1326	2.4x10 ⁻³ (1.2x10 ⁻³ – 3.3x10 ⁻³)	1.2x10 ⁻² (7.5x10 ⁻³ – 3.9x10 ⁻²)	2.44	1.11 (0.93 - 1.33)	1.75 (1.05 - 2.91)
	Pyriproxyfen	SLAB	697	1.9x10 ⁻⁵ (1.6x10 ⁻⁵ – 2.2x10 ⁻⁵)	6.3x10 ⁻⁵ (4.9x10 ⁻⁵ – 8.9x10 ⁻⁵)	3.18	-	-
		TZI	1495	2.7x10 ⁻⁵ (2.0x10 ⁻⁵ – 3.5x10 ⁻⁵)	3.1x10 ⁻⁴ (2.3x10 ⁻⁴ – 4.4x10 ⁻⁴)	1.57	1.43 (1.3 - 1.57)	4.88 (4.14 - 5.74)
	Methopren	SLAB	248	7.1x10 ⁻⁴ (4.0x10 ⁻⁴ – 1.2x10 ⁻³)	5.6x10 ⁻³ (2.8x10 ⁻³ – 2.8x10 ⁻²)	1.83	-	-
		TZI	895	6.2x10 ⁻⁴ (3.8x10 ⁻⁴ – 8.8x10 ⁻⁴)	2.3x10 ⁻² (1.4x10 ⁻² – 4.8x10 ⁻²)	1.05	0.87 (0.73 - 1.04)	4.06 (2.48 - 6.64)
<i>Ae. aegypti</i>	Temephos	BORA	998	4.2x10 ⁻³ (4.1x10 ⁻³ – 4.3x10 ⁻³)	6.1x10 ⁻³ (5.9x10 ⁻³ – 6.4x10 ⁻³)	10	-	-
		PT	978	3.5x10 ⁻³ (2.9x10 ⁻³ – 4.2x10 ⁻³)	6.4x10 ⁻³ (5.1x10 ⁻³ – 1.2x10 ⁻²)	6.46	0.84 (0.74 - 0.96)	1.04 (0.78 - 1.38)
	<i>Bti</i>	BORA	1200	1.0x10 ⁻¹ (9.3x10 ⁻² – 1.1x10 ⁻¹)	2.7x10 ⁻¹ (2.3x10 ⁻¹ – 3.3x10 ⁻¹)	3.91	-	-
		PT	1001	8.1x10 ⁻² (7.2x10 ⁻² – 9.0x10 ⁻²)	2.1x10 ⁻¹ (1.8x10 ⁻¹ – 2.7x10 ⁻¹)	4.04	0.81 (0.6 - 1.08)	0.78 (0.29 - 2.11)

	Spinosad	BORA	1187	5.5×10^{-2} (5.0×10^{-2} – 6.0×10^{-2})	1.2×10^{-1} (1.1×10^{-1} – 1.6×10^{-1})	4.61	-	-
		PT	787	6.0×10^{-2} (4.7×10^{-2} – 7.6×10^{-2})	1.2×10^{-1} (8.7×10^{-2} – 3.3×10^{-1})	5.58	1.09 (0.83 - 1.42)	0.94 (0.44 - 2.01)
	Diflubenzuron	BORA	1187	1.3×10^{-3} (7.3×10^{-4} – 1.9×10^{-3})	5.8×10^{-3} (3.2×10^{-3} – 8.2×10^{-2})	2.55	-	-
		PT	995	1.6×10^{-3} (1.2×10^{-3} – 1.9×10^{-3})	3.3×10^{-3} (2.6×10^{-3} – 5.9×10^{-3})	5.08	1.17 (1.05 - 1.31)	0.56 (0.42 - 0.74)
	Pyriproxyfen	BORA	594	6.8×10^{-5} (5.5×10^{-5} – 9.2×10^{-5})	1.8×10^{-4} (1.2×10^{-4} – 4.8×10^{-4})	3.84	-	-
		PT	1290	3.6×10^{-5} (2.8×10^{-5} – 5.1×10^{-5})	2.9×10^{-4} (1.6×10^{-4} – 9.4×10^{-4})	1.83	0.54 (0.49 - 0.59)	1.6 (1.23 - 2.07)
	Methopren	BORA	999	1.1×10^{-3} (7.2×10^{-4} – 1.5×10^{-3})	4.1×10^{-3} (2.4×10^{-3} – 1.5×10^{-2})	2.81	-	-
		PT	1195	1.0×10^{-3} (8.7×10^{-4} – 1.1×10^{-3})	3.5×10^{-3} (2.8×10^{-3} – 5.0×10^{-3})	2.99	0.94 (0.85 - 1.05)	0.87 (0.65 - 1.16)
<i>Ae. albopictus</i>	Temephos	PLP	1084	6.2×10^{-3} (5.8×10^{-3} – 6.7×10^{-3})	9.6×10^{-3} (8.4×10^{-3} – 1.2×10^{-2})	8.82	-	-
		KWI	1205	6.3×10^{-3} (6.0×10^{-3} – 6.6×10^{-3})	9.7×10^{-3} (8.8×10^{-3} – 1.1×10^{-2})	8.62	1.01 (0.88 - 1.16)	1.02 (0.71 - 1.47)
<i>Bti</i>	PLP	1185	6.2×10^{-2} (5.6×10^{-2} – 6.7×10^{-2})	1.7×10^{-1} (1.5×10^{-1} – 2.0×10^{-1})	3.76	-	-	
		KWI	1199	8.2×10^{-2} (7.2×10^{-2} – 9.2×10^{-2})	2.0×10^{-1} (1.7×10^{-1} – 2.5×10^{-1})	4.37	1.33 (1.02 - 1.74)	1.16 (0.58 - 2.31)
Spinosad	PLP	1200	6.6×10^{-2} (5.9×10^{-2} – 7.2×10^{-2})	1.6×10^{-1} (1.4×10^{-1} – 1.9×10^{-1})	4.38	-	-	
		KWI	992	9.2×10^{-2} (8.2×10^{-2} – 1.0×10^{-1})	2.5×10^{-1} (2.1×10^{-1} – 3.5×10^{-1})	3.73	1.4 (1.06 - 1.84)	1.63 (0.64 - 4.12)
Diflubenzuron	PLP	372	2.6×10^{-3} (2.0×10^{-3} – 1.0×10^{-2})	5.9×10^{-3} (3.6×10^{-3} – 2.73)	4.62	-	-	
		KWI	1000	1.5×10^{-3} (1.3×10^{-3} – 1.7×10^{-3})	3.2×10^{-3} (2.7×10^{-3} – 4.2×10^{-3})	5	0.57 (0.48 - 0.68)	0.53 (0.31 - 0.93)
Pyriproxyfen	PLP	943	6.4×10^{-5} (5.0×10^{-5} – 9.0×10^{-5})	4.9×10^{-4} (2.6×10^{-4} – 1.7×10^{-3})	1.87	-	-	
		KWI	1000	6.6×10^{-5} (5.3×10^{-5} – 8.4×10^{-5})	4.1×10^{-4} (2.4×10^{-4} – 1.1×10^{-3})	2.08	1.02 (0.95 - 1.1)	0.83 (0.63 - 1.1)
Methopren	PLP	498	1.3×10^{-3} (7.8×10^{-4} – 2.6×10^{-3})	1.0×10^{-2} (4.0×10^{-3} – 1.14)	1.83	-	-	
		KWI	498	4.0×10^{-4} (2.8×10^{-4} – 5.0×10^{-4})	2.9×10^{-3} (2.2×10^{-3} – 4.7×10^{-3})	1.89	0.3 (0.25 - 0.36)	0.28 (0.17 - 0.49)

Resistance levels of colonies from field populations (DZOU, TZ1, PT and KWI) to temephos, *Bti*, spinosad, diflubenzuron, pyriproxyfen and methopren are compared to resistance levels of the reference strains KIS and AcerKIS, SLAB, BORA and PLP, respectively. N is the total number of tested larvae. The 50 and 95% lethal concentrations (LC₅₀ and LC₉₅) and the 50 and 95% emergence inhibition concentrations (EIC₅₀ and EIC₉₅) are expressed in mg/l, with their associated confidence intervals at 95% (CI₉₅). Finally, the corresponding resistant ratios (RR), i.e. the ratios of LC or EIC of the tested colony over the susceptible reference strain, are also indicated and bolded when significantly higher than 1 (i.e. when CI₉₅ does not include 1).